



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

CHESNUT *et al.*

Appl. No.: 10/792,035

Filed: March 4, 2004

For: **Methods and Compositions for  
Synthesis of Nucleic Acid Molecules  
Using Multiple Recognition Sites**

Confirmation No.: 1259

Art Unit: 1636

Examiner: Ketter, James S.

Atty. Docket: 0942.5340005/BJD/JKM

**Second Supplemental Information Disclosure Statement**

**Under 37 C.F.R. § 1.97(c)**

***Mail Stop Amendment***

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms, PTO/SB/08A and PTO/SB/08B, are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Second Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' First Supplemental Information Disclosure Statement filed on March 4, 2005 in connection with the above-captioned application.

Copies of documents **AN23** to **AO23**, **AL24** to **AM24**, **AT214** to **AR216**, **AT216** to **AR217**, **AS218** to **AR220**, **AT220**, **AS221** to **AS222**, **AR223** to **AR225**, **AT225**, **AS226**, **AS227**, and **AR228** to **AS233** are submitted. In accordance with 37 C.F.R. § 1.98(a)(2), copies of U.S. patents and patent application publications, documents **AE22** to **AA25**, cited on the attached IDS Form, PTO/SB/08A, are not submitted. In addition, copies of documents **AT233** and **AR234** are not provided in accordance with the U.S.

Patent and Trademark Office OG notice of October 19, 2004, which states: "the requirement in 37 C.F.R. § 1.98(a)(2)(iii) for a legible copy of the specification, including the claims, and drawings of each cited pending U.S. patent application (or portion of the application which caused it to be listed) is sua sponte waived where the cited pending application is stored in the USPTO's IFW system."

Copies of documents, **AM23**, **AP23**, **AS216**, **AS217** to **AR218**, **AS220**, **AR221**, **AT222**, **AS225**, **AR226**, **AT226** to **AR227**, and **AT227** were cited by or submitted to the Office in an Information Disclosure Statement that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. 10/005,876, filed December 7, 2001, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

In accordance with 37 C.F.R. § 1.98(a)(3), Applicants' undersigned representative submits the following discussion of the relevance of the non-English language documents **AT218**, **AS221**, **AT221**, **AS228**, and **AT228** cited on PTO/SB/08B:

Document **AT218**, Gotou, N., *et al.*, "Gateway, Cloning Technology," *Exp. Med. Sci.* 18:2716-2717, Invitrogen Corporation (December 2000), is in the Japanese language. An unverified English language translation of document **AT218** is attached as document **AR219**.

Document **AS221**, Kisu, Y., *et al.*, "Development of high accuracy and high through put production multi purpose Gateway entry clones production. I. Improvement of the PCR condition for construction of the entry clone," abstract available at [http://biotech.nikkeibp.co.jp/netlink/Ito/gateway/new\\_info/contents9.html](http://biotech.nikkeibp.co.jp/netlink/Ito/gateway/new_info/contents9.html), (November 2000), is in

the Japanese language. An unverified English language abstract of document AS221 can be found on the face page of the document.

Document **AT221**, Kisu, Y., *et al.*, "Development of high-throughput technology of entry clones of the multi-purpose Gateway cloning system (III): An improved method for high-efficient and high-fidelity construction of the entry clones," *Poster Session of the Annual Meeting of Japan Society of Molecular Biology*, Abstract No. 2P-730 (December 2001), is in the Japanese language. An unverified English language translation of document AT221 is attached as document **AR222**.

Document **AS228**, Yahata, K., *et al.*, "Development of high accuracy and high through put production of multi purpose Gateway entry clones. Very low mutation frequency in constructing 60 entry clones of human full length cDNAs," abstract available at [http://biotech.nikkeibp.co.jp/netlink/Ito/gateway/new\\_info/contents9.html](http://biotech.nikkeibp.co.jp/netlink/Ito/gateway/new_info/contents9.html) (November 2000), is in the Japanese language. An unverified English language abstract of document AS228 can be found on the face page of the document.

Document **AT228**, Yahata, K., *et al.*, "Development of high accuracy and high-throughput production method of the entry clone of multi-purpose Gateway system. (IV) Improvement of DNA sequencing method for Gateway entry clones," *Poster Session of the Annual Meeting of Japan Society of Molecular Biology*, Abstract No. 2P-731 (December 2001), is in the Japanese language. An unverified English language translation of document AT228 is attached as document **AR229**.

The Examiner's attention is directed to the following co-pending U.S. Patent Applications, which are directed to related technical subject matter:

Application No. 11/106,715, Byrd *et al.*, filed April 15, 2005 and listed as Document **AT233**; and

Application No. 11/290,804, Gray *et al.*, filed December 1, 2005 and listed as Document **AR234**.

In accordance with the recent Federal Circuit decision in *Dayco Prods., Inc. v. Total Containment, Inc.* 329 F.3d 1358 (Fed. Cir. 2003), Applicants submit herewith Office Actions from:

the related co-pending U.S. Patent Application No. 09/432,085, Hartley *et al*, as Document **AT229**;

the related co-pending U.S. Patent Application No. 09/517,466, Hartley *et al* , as Document **AR230**;

the related co-pending U.S. Patent Application No. 09/855,797, Hartley *et al*, as Documents **AS230** and **AT230**;

the related co-pending U.S. Patent Application No. 09/907,719, Hartley *et al*, as Document **AR231**;

the related co-pending U.S. Patent Application No. 10/058,291, Hartley *et al* , as Documents **AS231** and **AT231**;

the related co-pending U.S. Patent Application No. 10/058,292, Hartley *et al*, as Documents **AR232** and **AS232**;

the related co-pending U.S. Patent Application No. 10/151,690, Brasch *et al.*, as Document **AT232**;

the related co-pending U.S. Patent Application No. 10/162,879, Hartley *et al.*, as Documents **AR233** and **AS233**;

which are directed to related technical subject matter. The identification of these applications and Office Actions is not to be construed as a waiver of secrecy as to those applications now or upon issuance of the present application as a patent.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent

application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application. Attached is our PTO-2038 Credit Card Payment Form in the amount of \$180.00 in payment of the fee under 37 C.F.R. § 1.17(p).

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

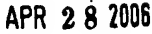


Jeffrey K. Mills  
Agent for Applicants  
Registration No. 56,413

Date: April 28, 2006

1100 New York Avenue, N.W.  
Washington, D.C. 20005-3934  
(202) 371-2600

525058\_1.DOC



U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

## SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Application Number	10/792,035
Filing Date	March 4, 2004
First Named Inventor	Jonathan D. CHESNUT
Art Unit	1636
Examiner Name	Ketter, James S.
Attorney Docket Number	0942.5340005/BJD/JKM

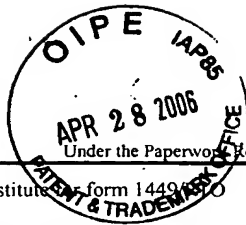
Attorney Docket Number | 0942.5340005/BJD/JKM

## 524798v1

*If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*

*If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*





<b>SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/792,035
				Filing Date	March 4, 2004
				First Named Inventor	Jonathan D. CHESNUT
				Art Unit	1636
				Examiner Name	Ketter, James S.
Sheet	1	of	7	Attorney Docket Number	0942.5340005/BJD/JKM

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	AT214	Alonso, J.C., "Site-specific recombination in Gram-positive theta-replicating plasmids," <i>FEMS Microbiol. Lett.</i> 142:1-10, Elsevier Science B.V. (1996)	
	AR215	Amin, A.A., <i>et al.</i> , "Synthesis of an Enzymatically Active FLP Recombinase In Vitro: Search for a DNA-Binding Domain," <i>Molec. Cell. Biol.</i> 9: 1987-1995, American Society for Microbiology (1989)	
	AS215	Andersen, A.H., <i>et al.</i> , "Studies if the Topoisomerase II-mediated Cleavage and Religation Reactions by Use of a Suicidal Double-stranded DNA Substrate," <i>J. Biol. Chem.</i> 266:9203-9210, The American Society for Biochemistry and Molecular Biology, Inc. (1991)	
	AT215	Aoki, K., <i>et al.</i> , "Efficient Generation of Recombinant Adenoviral Vectors bt Cre-lox Recombination In Vitro," <i>Molec. Med.</i> 5:224-231, Springer (1999)	
	AR216	Berger, J.M., "Structure of DNA topoisomerase," <i>Biochim. Biophys. Acta</i> 1400:3-18, Elsevier Science B.V. (1999)	
	AS216	Bliska, J.B and Cozzarelli, N.R., "Use of Site-Specific Recombination as a Probe of DNA Structure and Metabolism <i>in Vivo</i> ," <i>J. Molec. Biol.</i> 194:205-218, Academic Press Inc. (1987)	
	AT216	Carninci, P. and Hayashizaki, Y., "High-Efficiency Full-Length cDNA Cloning," <i>Meth. Enzymol.</i> 303:19-44, Academic Press (1999)	
	AR217	Caron, P.R. and Wang, J.C., "Appendix II: Alignment of Primary Sequences of DNA Topoisomerases," <i>Adv. Pharmacol.</i> 29B:271-297, Academic Press, Inc. (1994)	
	AS217	Chatterjee, P.K. and Sternberg, N.L., "Retrofitting High Molecular Weight DNA Cloned in P1: Introduction of Reporter Genes, Markers Selectable in Mammalian Cells and Generation of Nested Deletions," <i>Genet. Anal.: Biomolec. Eng.</i> 13:33-42, Elsevier Science B.V. (1996)	
	AT217	Cheng, C. and Shuman, S., "Recombinogenic Flap Ligation Pathway for Intrinsic Repair of Topoisomerase IB-Induced Double-Strand Breaks," <i>Mol. Cell. Biol.</i> 20:8059-8068, American Society for Microbiology (2000)	

524894v1

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/792,035
				Filing Date	March 4, 2004
				First Named Inventor	Jonathan D. CHESNUT
				Art Unit	1636
				Examiner Name	Ketter, James S.
Sheet	2	of	7	Attorney Docket Number	0942.5340005/BJD/JKM

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T <sup>2</sup>
	AR218	Cheng, C., <i>et al.</i> , "Conservation of Structure and Mechanism between Eukaryotic Topoisomerase I and Site-Specific Recombinases," <i>Cell</i> 92841-850, Cell Press (1998)	
	AS218	DiGate, R.J. and Mariani, K.J., "Molecular Cloning and DNA Sequence Analysis of Escherichia coli topB, the Gene Encoding Topoisomerase III," <i>J. Biol. Chem.</i> 264:17924-17930, The American Society for Biochemistry and Molecular Biology, Inc. (1989)	
	AT218	Gotou, N., <i>et al.</i> , "Gateway™ Cloning Technology," <i>Exp. Med. Sci.</i> 18:2716-2717, Invitrogen Corporation (2000)	Yes
	AR219	English language translation for Gotou, N., <i>et al.</i> , "Gateway, Cloning Technology," <i>Exp. Med. Sci.</i> 18:2716-2717, Invitrogen Corporation (2000)	
	AS219	Gupta, M., <i>et al.</i> , "Eukaryotic DNA topoisomerases I," <i>Biochim. Biophys. Acta</i> 1262:1-14, Elsevier Science B.V. (1995)	
	AT219	Hanai, R., <i>et al.</i> , "Human TOP3: A single-copy gene encoding DNA topoisomerase III," <i>Proc. Natl. Acad. Sci. USA</i> 93:3653-3657, The National Academy of Sciences (1996)	
	AR220	Huang, L.-C., <i>et al.</i> , "A bacterial model system for chromosomal targeting," <i>Nucl. Acids Res.</i> 19:443-448, Oxford University Press (1991)	
	AS220	Kanegae, Y., <i>et al.</i> , "Efficient gene activation in mammalian cells by using recombinant adenovirus expressing site-specific Cre recombinase," <i>Nucl. Acids Res.</i> 23:3816-3821, Oxford University Press (1995)	
	AT220	Kijima, T., <i>et al.</i> , "Application of the Cre Recombinase/loxP System Further Enhances Antitumor Effects in Cell Type-specific Gene Therapy against Carcinoembryonic Antigen-producing Cancer," <i>Canc. Res.</i> 59:4906-4911, American Association for Cancer Research, Inc. (1999)	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/792,035
				Filing Date	March 4, 2004
				First Named Inventor	Jonathan D. CHESNUT
				Art Unit	1636
				Examiner Name	Ketter, James S.
Sheet	3	of	7	Attorney Docket Number	0942.5340005/BJD/JKM

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T <sup>2</sup>
	AR221	Kim, R.A. and Wang, J.C., "Identification of the Yeast TOP3 Gene Product as a Single Strans-specific DNA Topoisomerase," <i>J. Biol. Chem.</i> 267:17178-17185, The American Society for Biochemistry and Molecular Biology, Inc. (1992)	
	AS221	Kisu, Y., <i>et al.</i> , "Development of high accuracy and high through put production multi purpose Gateway entry clones production. I. Improvement of the PCR condition for construction of the entry clone," abstract available at <a href="http://biotech.nikkeibp.co.jp/netlink/Ito/gateway/new_info/contents9.html">http://biotech.nikkeibp.co.jp/netlink/Ito/gateway/new_info/contents9.html</a> , (2000)	Abs
	AT221	Kisu, Y., <i>et al.</i> , "Development of high-throughput technology of entry clones of the multi-purpose Gateway cloning system (III): An improved method for high-efficient and high-fidelity construction of the entry clones," <i>Poster Session of the Annual Meeting of Japan Society of Molecular Biology</i> , Abstract No. 2P-730 (December 2001)	Yes
	AR222	English language translation of Kisu, Y., <i>et al.</i> , "Development of high-throughput technology of entry clones of the multi-purpose Gateway cloning system (III): An improved method for high-efficient and high-fidelity construction of the entry clones," <i>Poster Session of the Annual Meeting of Japan Society of Molecular Biology</i> , Abstract No. 2P-730 (December 2001)	
	AS222	Li, Z., <i>et al.</i> , "The traE Gene of Plasmid RP4 Encodes a Homologue of Escherichia coli DNA Topoisomerase III," <i>J. Biol. Chem.</i> 272:19582-19587, The American Society for Biochemistry and Molecular Biology, Inc. (1997)	
	AT222	Lieber, A., <i>et al.</i> , "Recombinant Adenoviruses with Large Deletions Generated by Cre-Mediated Excision Exhibit Different Biological Properties Compared with First-Generation Vectors In Vitro and In Vivo," <i>J. Virol.</i> 70:8944-8960, American Society for Microbiology (1996)	
	AR223	Liu, X. and Gorovsky, M.A., "Mapping the 5' and 3' Ends of <i>Tetrahymena thermophelia</i> mRNAs Using RNA Ligase Mediated Amplification of cDNA Ends (RLM-RACE)," <i>Nucl. Acids Res.</i> 21:4954-4960, Oxford University Press (1993)	
	AS223	Ng, P., <i>et al.</i> , "A High-Efficiency Cre//loxP-Based System for Construction of Adenoviral Vectors," <i>Human Gene Ther.</i> 10:2667-2672, Mary Ann Liebert, Inc. (1999)	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				<b>Complete if Known</b>	
<b>SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	10/792,035
				Filing Date	March 4, 2004
				First Named Inventor	Jonathan D. CHESNUT
				Art Unit	1636
				Examiner Name	Ketter, James S.
Sheet	4	of	7	Attorney Docket Number	0942.5340005/BJD/JKM

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T <sup>2</sup>
	AT223	"pENTR Directional TOPO <sup>®</sup> Cloning Kits," <i>Invitrogen Manual</i> , catalog nos. K2400-20, K2400-480, K2400-500, K2420-20, K2420-80, K2420-500, Version B, Invitrogen Corporation, Carlsbad, CA, 48 pages (July 2002)	
	AR224	Petersen, B.Ø., <i>et al.</i> , "Characterization of a DNA Topoisomerase Encoded by <i>Amsacta moorei</i> Entomopoxvirus," <i>Viol.</i> 230:197-206, Academic Press (1997)	
	AS224	Pfeifer, A., <i>et al.</i> , "Delivery of the Cre recombinase by a self-deleting lentiviral vector: Efficient gene targeting <i>in vivo</i> ," <i>Proc. Natl. Acad. Sci. USA</i> 98:11450-11455, National Academy of Science (September 2001)	
	AT224	"pLenti6/V5 Directional TOPO <sup>®</sup> Cloning Kit," <i>Invitrogen Manual</i> , catalog no. K4955-10, Version B, Invitrogen Corporation, Carlsbad, CA, 52 pages (May 2002)	
	AR225	Roca, J. and Wang, J.C., "The Capture of a DNA Double Helix by an ATP-Dependent Protein Clamp: A Key Step in DNA Transport by Type II DNA Topoisomerases," <i>Cell</i> 71:833-840, Cell Press (1992)	
	AS225	Sekiguchi, J. and Shuman, S., "Requirements for noncovalent binding of vaccinia topoisomerase I to duplex DNA," <i>Nucl. Acids Res.</i> 22:5360-5365, Oxford University Press (1994)	
	AT225	Shashikant, C.S., <i>et al.</i> , "Recombinogenic targeting: a new approach to genomic analysis - a review," <i>Gene</i> 223:9-20, Elsevier Science B.V. (1998)	
	AR226	Shuman, S., "Vaccinia virus DNA topoisomerase: a model eukaryotic type IB enzyme," <i>Biochim. Biophys. Acta</i> 1400:321-337, Elsevier Science B.V. (1998)	
	AS226	Shuman, S. and Bernard M., "Identification of a vaccinia virus gene encoding a type I DNA topoisomerase," <i>Proc. Natl. Acad. Sci. USA</i> 84:7478-7482, National Academy of Sciences (1987)	
	AT226	Walhout, A.J.M., "Protein Interaction Mapping in <i>C. elegans</i> Using Protein Involved in Vulval Development," <i>Science</i> 287:116-122, American Association for the Advancement of Science (2000)	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				<b>Complete if Known</b>	
<b>SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	10/792,035
				Filing Date	March 4, 2004
				First Named Inventor	Jonathan D. CHESNUT
				Art Unit	1636
				Examiner Name	Ketter, James S.
Sheet	5	of	7	Attorney Docket Number	0942.5340005/BJD/JKM

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T <sup>2</sup>
	AR227	Walhout, A.J.M., "GATEWAY Recombinational Cloning: Application to the Cloning of Large Numbers of Open Reading Frames or ORFeomes," <i>Meth. Enzymol.</i> 328:575-592, Academic Press (2000)	
	AS227	Wang, J.C., "DNA Topoisomerases: Why So Many?," <i>J. Biol. Chem.</i> 266:6659-6662, The American Society for Biochemistry and Molecular Biology, Inc. (1991)	
	AT227	Wang, Y., <i>et al.</i> , "Targeted DNA recombination in vivo using an adenovirus carrying the cre recombinase gene," <i>Proc. Natl. Acad. Sci. USA</i> 93:3932-3936, National Academy of Sciences (1996)	
	AR228	Wilson, T.M., <i>et al.</i> , "Cloning and Characterization of <i>Drosophila</i> Topoisomerase III $\beta$ ," <i>J. Biol. Chem.</i> 275:1533-1540, The American Society for Biochemistry and Molecular Biology, Inc. (2000)	
	AS228	Yahata, K., <i>et al.</i> , "Development of high accuracy and high through put production of multi purpose Gateway entry clones. Very low mutation frequency in constructing 60 entry clones of human full length cDNAs," abstract available at <a href="http://biotech.nikkeibp.co.jp/netlink/Ito/gateway/new_info/contents9.html">http://biotech.nikkeibp.co.jp/netlink/Ito/gateway/new_info/contents9.html</a> (2000)	Abs
	AT228	Yahata, K., <i>et al.</i> , "Development of high accuracy and high-throughput production method of the entry clone of multi-purpose Gateway system. (IV) Improvement of DNA sequencing method for Gateway entry clones," <i>Poster Session of the Annual Meeting of Japan Society of Molecular Biology</i> , Abstract No. 2P-731 (December 2001)	Yes
	AR229	English language translation of Yahata, K., <i>et al.</i> , "Development of high accuracy and high-throughput production method of the entry clone of multi-purpose Gateway system. (IV) Improvement of DNA sequencing method for Gateway entry clones," <i>Poster Session of the Annual Meeting of Japan Society of Molecular Biology</i> , Abstract No. 2P-731 (December 2001)	
	AS229	Zhang, H.L., <i>et al.</i> , " <i>Escherichia coli</i> DNA Topoisomerase III Is a Site-specific DNA Binding Protein That Binds Asymmetrically to Its Cleavage Site," <i>J. Biol. Chem.</i> 270:23700-23705, The American Society for Biochemistry and Molecular Biology, Inc. (1995)	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/792,035
				Filing Date	March 4, 2004
				First Named Inventor	Jonathan D. CHESNUT
				Art Unit	1636
				Examiner Name	Ketter, James S.
				Attorney Docket Number	0942.5340005/BJD/JKM
Sheet	6	of	7		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T <sup>2</sup>
	AT229	Copy of Office Action for United States Patent Application No. 09/432,085, Hartley <i>et al.</i> , mailed June 16, 2005	
	AR230	Copy of Office Action for United States Patent Application No. 09/517,466, Hartley <i>et al.</i> , mailed November 18, 2005	
	AS230	Copy of Office Action for United States Patent Application No. 09/855,797, Hartley <i>et al.</i> , mailed April 20, 2005	
	AT230	Copy of Office Action for United States Patent Application No. 09/855,797, Hartley <i>et al.</i> , mailed October 11, 2005	
	AR231	Copy of Office Action for United States Patent Application No. 09/907,719, Hartley <i>et al.</i> , mailed July 26, 2005	
	AS231	Copy of Office Action for United States Patent Application No. 10/058,291, Hartley <i>et al.</i> , mailed April 28, 2005	
	AT231	Copy of Office Action for United States Patent Application No. 10/058,291, Hartley <i>et al.</i> , mailed October 21, 2005	
	AR232	Copy of Office Action for United States Patent Application No. 10/058,292, Hartley <i>et al.</i> , mailed May 26, 2005	
	AS232	Copy of Office Action for United States Patent Application No. 10/058,292, Hartley <i>et al.</i> , mailed November 18, 2005	
	AT232	Copy of Office Action for United States Patent Application No. 10/151,690, Brasch <i>et al.</i> , mailed April 18, 2005	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/792,035
				Filing Date	March 4, 2004
				First Named Inventor	Jonathan D. CHESNUT
				Art Unit	1636
				Examiner Name	Ketter, James S.
Sheet	7	of	7	Attorney Docket Number	0942.5340005/BJD/JKM

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T <sup>2</sup>
	AR233	Copy of Office Action for United States Patent Application No. 10/162,879, Hartley <i>et al.</i> , mailed April 28, 2005	
	AS233	Copy of Office Action for United States Patent Application No. 10/162,879, Hartley <i>et al.</i> , mailed October 20, 2005	
	AT233	United States Patent Application No. 11/106,715, Byrd <i>et al.</i> , filed April 15, 2005	
	AR234	United States Patent Application No. 11/290,804, Gray <i>et al.</i> , filed December 1, 2005	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.